Chemical & Engineering NEWS

U.S. chemical profitability continues to plunge Page 17

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Superfund

EPA gears up to stop waste disasters

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Chemical & Engineering NEWS

Cover: Kin-Buc landfill in Edison, N.J., hit by fire in 1978, contains 70 million gal of chemical wastes. EPA has spent $1.1 million from Superfund for emergency cleanup at the site and committed $2.8 million more for remedial work

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Specialty firms top chemical profitability

Most specialty chemical firms remained more profitable than basic chemical firms in 1981, as all profitability measures continued to fall

William J. Storck
C&EN, New York

Specialty chemical firms' profitability generally declined last year, but they continued to dominate C&EN's rankings of profitability measures among U.S. chemical companies.

However, there are some changes in the profitability lineup for 1981. No longer do the small mineral and fertilizer companies head up all of the rankings. For 1981 only one, Freeport-McMoRan, ran first and this was only in profit margin. The other three profitability measures—return on assets, return on investment, and return on stockholders' equity—were led by companies selling high-value-added specialty chemicals. Thus, the specialty chemical companies continued to enjoy the benefits of the high rates of return on their products. These high returns were due primarily to the high-value-added nature of those products.

However, the fertilizer and mineral dominated companies seem to have come to the end of one of the normal booms in their highly cyclical business. Thus, with fertilizer capacity use rates in the low 60% range because of lack of demand, fertilizer producers are losing profitability fast.

As a result, in terms of overall profitability, Freeport-McMoRan dropped from first place in 1980 (C&EN, June 1, 1981, page 8), to third place in 1981, behind Nalco Chemical and International Flavors & Fragrances, two specialty chemical companies.

Nalco led in two of the profitability measures—return on assets and return on equity. Its return on assets in 1981 was 17.4%, the same as in 1980. And its return on equity was 24.2%, up from 23.6% in 1980. Nalco came in second in return on investment at 14.5%, the same percentage as in 1980. The year before, however, the company had been fifth in return on investment.

The 1981 leader in return on investment was Chemed at 15.1%. It was not included in the 1980 rankings, because much of its results were accounted for within W. R. Grace, which owned a big chunk of the Cincinnati-based company.

And Nalco, which did so well overall, was third in profit margin at 12.2%, up from eighth place in the

The top companies in overall profitability

1 Nalco Chemical
2 International Flavors
3 Freeport-McMoRan
4 Lubrizol
5 Petrolite
6 Chemed
7 Great Lakes Chemical
8 First Mississippi
9 International Minerals
10 National Distillers

Profit margins at U.S. chemical companies fell to 5.6% in 1981

Rank[a] 1981	Rank[a] 1980		Profit margin[b] 1981	Profit margin[b] 1980
1	2	Freeport-McMoRan	19.1%	22.2%
2	5	International Flavors	14.7	14.1
3	8	Nalco Chemical	12.2	11.7
4	3	Great Lakes Chemical	11.7	14.9
5	7	Lubrizol	10.2	12.1
6	c	Chemed	10.0	8.0
7	9	Petrolite	9.4	9.8
8	16	Stauffer Chemical	8.7	7.2
9	11	First Mississippi	8.3	8.6
10	12	Air Products	8.0	8.1
11	12	International Minerals	7.7	8.1
12	16	Liquid Air	7.4	7.2
13	c	National Distillers	6.7	5.4
14	30	Monsanto	6.4	3.9
14	18	Union Carbide	6.4	7.0
16	20	PPG Industries	6.3	6.6
17	26	W. R. Grace	5.5	4.7
18	23	Allied	5.4	5.2
18	27	American Cyanamid	5.4	4.6
20	25	Ethyl	5.2	5.1
20	c	FMC	5.2%	4.1%
22	27	Thiokol	5.1	4.6
23	27	Hercules	5.0	4.6
23	19	Williams Cos.	5.0	6.7
25	6	Loctite	4.9	13.0
25	22	Rohm & Haas	4.9	5.4
27	15	Dow Chemical	4.8	7.6
28	31	Essex Chemical	4.7	3.6
29	38	Olin	4.6	1.8
30	c	H. B. Fuller	4.1	3.3
31	31	Celanese	3.8	3.6
32	36	Crompton & Knowles	3.5	3.2
32	31	Pennwalt	3.5	3.6
34	c	Philip A. Hunt Chemical	3.4	3.8
35	35	Stepan Chemical	3.2	3.4
36	34	Witco Chemical	3.0	3.5
37	37	B. F. Goodrich	2.9	2.0
38	38	Reichhold Chemicals	1.8	1.8
39	40	Akzona	1.0	0.5
40	c	GAF	def	1.5
		AVERAGE[d]	5.6%	6.1%

a Ranking for 1980 is as it appeared in previous survey (C&EN, June 1, 1981, page 8). b After-tax income as a percentage of sales; 1980 figures are not restated. c Company did not appear in previous survey. d Average for 1980 is for companies listed in previous survey. **def** = deficit.

Return on investment declined to 4.8%

Rank[a] 1981	Rank[a] 1980		Return on investment[b] 1981	Return on investment[b] 1980
1	c	Chemed	15.1%	12.9%
2	5	Nalco Chemical	14.5	14.5
3	6	International Flavors	13.1	13.2
4	4	Lubrizol	11.5	14.9
5	9	Petrolite	11.0	11.0
6	2	Freeport-McMoRan	8.8	15.6
7	8	Great Lakes Chemical	8.5	12.7
8	c	H. B. Fuller	7.9	6.0
9	12	First Mississippi	7.8	8.2
10	c	National Distillers	7.7	6.4
11	17	W. R. Grace	7.2	5.6
12	14	Thiokol	6.8	6.1
13	19	Essex Chemical	6.6	5.3
14	13	International Minerals	6.1	6.4
15	28	Stauffer Chemical	5.8	4.7
16	26	Crompton & Knowles	5.7	4.9
16	3	Loctite	5.7	15.5
18	16	Ethyl	5.5	5.8
19	c	FMC	5.3	4.3
19	19	PPG Industries	5.3	5.3
21	21	Liquid Air	5.2%	5.2%
22	36	Monsanto	5.1	3.0
23	33	Allied	5.0	3.7
24	31	American Cyanamid	4.8	4.1
24	29	Hercules	4.8	4.3
26	26	Air Products	4.7	4.9
26	25	Rohm & Haas	4.7	5.0
26	21	Union Carbide	4.7	5.2
29	21	Witco Chemical	4.3	5.2
30	39	Olin	3.9	1.5
31	c	Philip A. Hunt Chemical	3.7	4.2
31	32	Pennwalt	3.7	4.0
33	17	Dow Chemical	3.6	5.6
34	21	Williams Cos.	3.5	5.2
35	34	Stepan Chemical	3.4	3.6
36	35	Reichhold Chemicals	3.3	3.1
37	37	Celanese	3.1	2.8
38	38	B. F. Goodrich	2.7	2.2
39	40	Akzona	0.9	0.4
40	c	GAF	def	1.3
		AVERAGE[d]	4.8%	5.0%

a Ranking for 1980 is as it appeared in previous survey (C&EN, June 1, 1981, page 8). b After-tax income as a percentage of current assets plus gross plant; 1980 figures are not restated. c Company did not appear in previous survey. d Average for 1980 is for companies listed in previous survey. def = deficit.

rankings for 1980 when its profit margin was 11.7%.

In 1981 rankings, profit margins (after-tax income as a percentage of sales) averaged 5.6%, compared with an average of 6.1% for the 40 companies surveyed for 1980. At the same time, return on investment (after-tax income as a percentage of current assets plus gross plant) declined to an average of 4.8% from 5.0% in 1980. Return on assets (after-tax income as a percentage of total assets) dropped to 6.2% last year from an average of 6.9% in 1980. And return on equity (after-tax income as a percentage of total year-end stockholders' equity) fell to 13.4% in 1981 from 14.5% the year before.

All of the balance sheet percentages—return on assets, investment,

Return on assets was 6.2% last year

Rank[a] 1981	Rank[a] 1980		Return on assets[b] 1981	Return on assets[b] 1980
1	2	Nalco Chemical	17.4%	17.4%
2	6	International Flavors	15.3	15.2
3	9	Petrolite	14.1	14.2
4	3	Lubrizol	13.7	17.1
5	c	Chemed	10.9	12.5
6	4	Freeport-McMoRan	10.8	16.5
7	5	Great Lakes Chemical	10.6	16.0
8	12	First Mississippi	9.3	9.0
9	c	H. B. Fuller	8.6	6.6
10	c	National Distillers	8.0	6.6
11	20	Thiokol	7.9	7.0
12	13	International Minerals	7.8	7.9
13	27	Essex Chemical	7.6	6.1
14	29	Stauffer Chemical	7.4	5.8
15	35	Monsanto	7.3	4.4
16	16	Ethyl	7.2	7.4
16	24	W. R. Grace	7.2	6.5
18	16	PPG Industries	7.1	7.4
19	14	Rohm & Haas	6.9	7.6
20	28	Hercules	6.8	6.0
21	22	Air Products	6.7%	6.6%
22	26	Allied	6.5	6.4
22	22	Liquid Air	6.5	6.6
24	31	American Cyanamid	6.4	5.5
24	c	FMC	6.4	5.5
26	18	Union Carbide	6.2	7.2
27	32	Crompton & Knowles	6.0	5.2
28	7	Loctite	5.7	14.4
28	39	Olin	5.7	2.2
30	24	Witco Chemical	5.3	6.5
31	34	Celanese	4.8	4.6
32	32	Pennwalt	4.7	5.2
33	21	Dow Chemical	4.5	6.9
34	c	Philip A. Hunt Chemical	4.3	5.1
35	37	Reichhold Chemicals	4.2	3.8
36	29	Williams Cos.	4.0	5.8
37	36	Stepan Chemical	3.7	3.9
38	38	B. F. Goodrich	3.4	2.8
39	40	Akzona	1.4	0.6
40	c	GAF	def	1.5
		AVERAGE[d]	6.2%	6.9%

a Ranking for 1980 is as it appeared in previous survey (C&EN, June 1, 1981, page 8). b After-tax income as a percentage of total assets; 1980 figures are not restated. c Company did not appear in previous survey. d Average for 1980 is for companies listed in previous survey. def = deficit.

Return on stockholders' equity dropped to 13.4%

Rank[a] 1981	Rank[a] 1980		Return on equity[b] 1981	Return on equity[b] 1980
1	5	Nalco Chemical	24.2%	23.6%
2	12	Essex Chemical	23.8	18.3
3	1	Freeport-McMoRan	22.5	29.6
4	11	First Mississippi	21.5	18.6
5	8	Petrolite	21.4	22.2
6	10	International Flavors	20.0	20.0
7	2	Lubrizol	19.7	24.6
8	15	Allied	18.3	17.4
9	c	H. B. Fuller	17.9	15.0
10	18	W. R. Grace	17.5	15.8
11	9	Great Lakes Chemical	16.5	20.3
12	14	Air Products	16.3	17.9
13	16	International Minerals	15.8	16.6
14	24	Thiokol	14.7	13.6
15	28	Stauffer Chemical	14.6	13.0
16	c	Chemed	13.8	17.5
17	c	FMC	13.6	11.5
17	c	National Distillers	13.6	11.7
19	37	Monsanto	13.4	9.1
20	30	Hercules	13.0	11.3
20	23	PPG Industries	13.0%	13.9%
20	19	Witco Chemical	13.0	15.4
23	31	American Cyanamid	12.9	11.1
24	25	Ethyl	12.6	13.5
25	26	Rohm & Haas	12.3	13.3
25	20	Union Carbide	12.3	14.6
27	27	Liquid Air	12.2	13.2
28	35	Stepan Chemical	12.1	10.7
29	31	Celanese	11.7	11.1
29	39	Olin	11.7	4.5
31	33	Crompton & Knowles	11.5	11.0
31	13	Dow Chemical	11.5	18.1
33	36	Reichhold Chemicals	9.8	9.3
34	21	Williams Cos.	9.6	14.4
35	33	Pennwalt	9.5	11.0
36	7	Loctite	8.6	22.6
37	38	B. F. Goodrich	8.4	6.5
38	c	Philip A. Hunt Chemical	6.7	6.9
39	40	Akzona	3.6	1.5
40	c	GAF	def	8.4
		AVERAGE[d]	13.4%	14.5%

a Ranking for 1980 is as it appeared in previous survey (C&EN, June 1, 1981, page 8). b After-tax income as a percentage of year-end stockholders' equity; 1980 figures are not restated. c Company did not appear in previous survey. d Average for 1980 is for companies listed in previous survey. def = deficit.

and equity—are figured on a year-end basis. This gives a more conservative ratio than some companies' figures, which are based on average balance sheet data for the year.

Although in the main the specialty companies performed well last year, it was not the case for all of them. For example, Loctite, the Connecticut-based adhesives manufacturer, came in for some hard times. Loctite's profit margin fell to 25th place (with 4.9%) in 1981 from sixth place (with 13.0%) in 1980. Its return on assets in 1981 was 5.7%, compared with 14.4% in 1980, sending it to 28th place from seventh. Return on investment for the company in 1981 was 5.7%, down from 15.5% in 1980, dropping it to the 16th slot from third. And return on stockholders' equity fell to 8.6% from 22.6% the year before, sending it down to 36th place from seventh in the previous ranking.

One of the best performances in terms of rankings was by one of the larger companies—Stauffer Chemical. During 1981 Stauffer managed to pull itself up smartly in all categories. Its profit margin increased to 8.7% in 1981 from 7.2% in 1980, bringing it up to eighth place from 16th the year before. Its return on assets increased to 7.4% in 1981 from 5.8% in 1980, sending it up to 14th place from 29th. Its return on investment improved to 5.8% from 4.7% in 1980, raising it to 15th from 28th. And return on equity was 14.6%, compared with 13.0% the year before, raising it to 15th from 28th.

In general, although the overall averages were falling, the number of companies with rising or falling profitability ratios was almost equal. In profit margins, 21 companies improved, and 18 companies declined from the year before. In return on assets, 20 were up and 19 were down. Return on investment split evenly with 18 improving and the same number declining. In return on equity, 20 had higher ratios, and 19 were down. □

About C&EN's profitability rankings

C&EN's rankings of companies by profitability are based on the 40 largest U.S. chemical companies, using non-restated data.

Thus, the 1981 ratios are compared with 1980 ratios derived from data published at the end of that year and not restated data as published in 1981 annual reports for 1980.

Also, the average ratios appearing at the end of each table are for the companies that appear on the list for the respective years. In other words, the 1981 average is for the companies on the list this year, and the 1980 average is for the companies that appeared on the list last year (C&EN, June 1, 1981, page 8).

To be considered a chemical company for inclusion on the list, a firm must have at least 40% of its sales in chemicals, with the chemical segment of the company making up the greatest part.

This year, there are six new companies on the list, and six others have been dropped. Those that are not on the list this year and that appeared last year include Du Pont and Diamond Shamrock, which had a change in the basic sales structure; Texasgulf and Mallinckrodt, which have been acquired by other firms; and Beker Industries and Lawter International. The companies new to the list this year are Chemed, FMC, National Distillers & Chemical, H. B. Fuller, Philip A. Hunt Chemical, and GAF.

The six new companies appear on the list as not having been ranked in 1980, and the companies that have been dropped for 1981 still retain their 1980 rankings, thus influencing the rank of other companies on the table. For instance, since Texasgulf was ranked first in profit margin in 1980 and Freeport-McMoRan was second, Freeport retains its number two 1980 ranking and does not move up to number one simply because Texasgulf is no longer included for 1981.